

Appl. No. : 10/642,358  
Filed : August 15, 2003

## REMARKS

### A. INTRODUCTION

The new listing of claims reflects amendments to Claims 45 and 49. The status of claims previously amended has been changed to "Previously presented."

In the Notice of Non-Compliant Amendment dated Nov. 18, 2005, the Examiner noted that Applicants had not presented remarks and/or arguments pertaining to independent claims 45 and 49 in a response to an Office Action filed on August 16, 2005. Claims 45-48 and Claim 49 had originally been rejected in the Office Action dated February 16, 2005 in which:

Claims 45-48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,001,635 by Yasutomi et al. (hereafter "Yasutomi") in view of U.S. patent no. 4,628,453 by Kamejima et al. (hereafter "Kamejima"); and

Claim 49 was rejected under 35 U.S.C. § 102(b) as being anticipated by "A Structure-from-motion Algorithm for Robot Vehicle Guidance" by Wang et al. (hereafter "Wang").

### B. AMENDMENTS

Applicants have amended independent Claims 45 and 49 herewith. Accordingly, the prior rejections to the same are moot as discussed in further detail below. No new matter has been added.

The amendments to the claims herein are made with respect to Applicants' previous office action reply of August 16, 2005, which is presumed to have been entered and made of record.

### C. REJECTION OF CLAIM 49 UNDER 35 U.S.C. § 102(b)

Applicants submit that claim 49 of the present application is patently distinguishable with respect to Wang because Wang fails to disclose one or more features claimed in this embodiment of the present invention. For example, amended claim 49 recites in relevant part: "determining that the mobile robot has been kidnapped when the video images indicate that the mobile robot is *in motion* and the mobile robot is *not instructed to be moving*." The method of detecting that a

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mobile robot has been kidnapped in claim 49 is, therefore, based on an inconsistency detected between the intended motional state and the actual motional state deduced from the video data.

In contrast to the present invention, Wang is only adapted to determine the actual motional state from the image sequence but not the intended motional state. Without the ability to recognize the inconsistency between the actual and intended motional states, Wang cannot detect whether the mobile robot has been kidnapped or has collided with an object that is outside its camera's field of view. Applicants respectfully assert, therefore, that Wang does not anticipate the present invention and requests allowance of claim 49.

**D. REJECTION OF CLAIMS 45-48 UNDER 35 U.S.C. § 103(a)**

Applicants respectfully submit that claim 45 of the present application is patently distinguishable with respect to the combination of Yasutomi and Kamejima because the combination fails to disclose one or more features of the claimed invention. Amended claim 45 recites in relevant part: "determining from visual image data collected from a video camera coupled to the mobile robot that the mobile robot has *ceased traveling* in a forward direction when the robot is *intended to be traveling* in a forward direction." This enables the mobile robot to take evasive maneuvers when the robot unexpected stops due, for example, to an obstacle that cannot be seen by the video camera.

In contrast to the present invention, Yasutomi discloses that the mobile robot is commanded to stop traveling in response to an obstacle detection (see figure 4). Thus, the mobile robot in Yasutomi ceases traveling in the forward direction when it purposefully stops to avoid a collision with a known obstacle. Neither Yasutomi nor Kamejima individually or in combination is adapted to detect and avoid an unknown obstacle based on the inconsistency between the actual and intended motional states. Applicants respectfully assert, therefore, that independent claim 45 and dependent claims 46-49 are allowable and requests allowance of the same.

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### Summary

In view of the foregoing supplemental amendments and remarks, Applicants respectfully request the Examiner to withdraw the rejections of Claims 45-49. Accordingly, Applicants respectfully request the Examiner to pass the present application to the issue process.

If there is any further impediment to the prompt allowance of the present application, Applicants request the Examiner to call the undersigned attorney of record at 310 407 3466 or at the telephone number listed below to resolve any such impediment.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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